LINKING SCIENCE AND TECHNOLOGY TO GLOBAL WATER SECURITY

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Water resources are under increasing stress globally. Decreasing water quality and quantity impact populations and ecosystems all over the world. The scientific community has, for many years, warned about the future sustainability of the planet's water resources. Water availability and water quality has become a major stress point between regions and nations, and has contributed to armed conflict between nations in the past.

The concept of water security as an element of a secure, sustainable future for our planet has been considered as a vital part of fostering cooperation instead of conflict between regions and nations. Encouraging regions and nations to work together to solve water-related problems of mutual interest can lead to more positive relationships in other politically charged areas.

Water-related science and technology can contribute significantly to non-political solutions of politically charged issues on water quality and quantity between regions or nations. If the science and technology sector becomes directly involved in trying to solve water-related problems on a global scale, it has the potential to increase domestic benefits and protect the United States' national and international interests.

Expanding the knowledge base of addressing the basic science elements of the water cycle, such as accurate hydrological cycle prediction or contaminant flow and transport throughout a system are still beyond the current understanding of the physical systems and the integration of those systems across scales.

We will explore some methods to increase water security nationally and internationally by examining science and technology gaps and how filling those gaps can produce a more sustainable and secure world.

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